OPERATOR'S MANUAL

Slow Code
19400
Rev. 7/89

datum inc
TIMING DIVISION
1363 S. State College Blvd., Anaheim, CA 92806-5790 • (714) 533-6333

Digitized by the Internet Archive
in 2025

https://archive.org/details/manualsplus_08006

INTRODUCTION

This assembly is used to provide the Five-rate Slow Code time word for User.

SLOW CODE DESCRIPTION

The serial code, Figure 1, is a 33-bit, amplitude and pulse-width modulated dc level-shift code. The code is composed of a reference marker, four code words or seconds, minutes, hours and days, followed by index markers to complete the time frame. Each code word contains sub-words as necessary to represent the units, tens and hundreds of units. Each sub-code word is weighted in a binary coded decimal (BCD) manner.

Codes 1, 2, and 3 have a frame length of 50 precise intervals. Codes 4 and 5 have a frame length of 60 precise intervals. Leading edges of all pulses are coincident with the leading edges of the time code frame intervals.

One pulse is deleted at the beginning and the end of each code word and between each sub-code word. Index markers complete the time frame after the time-of-year word has been read.

The amplitude and pulse-widths of the time frame information are as follows:

AMPLITUDE	
Binary 1:	+5V DC nominal
Binary 0:	+2V DC nominal

PULSE WIDTH	
Reference marker:	100% of bit interval
Binary 1:	50% of bit interval
Binary 0:	20% of bit interval

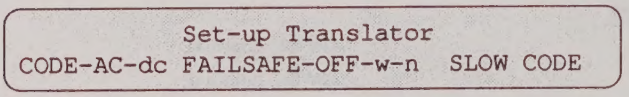
INSTALLATION

This assembly may be plugged into any available option position. Remove power from the PTS. Plug this assembly into the PTS, being careful that components are on the top side. Interconnect to the desired destination equipment. Apply power.

OPERATION

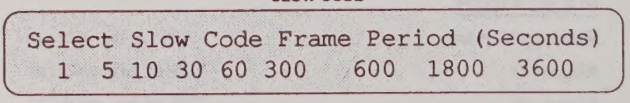
Operation of this option is normally transparent to the user. Selection of the output automatically follows the operating mode so that the time displayed on the PTS LED display, whether translator or generator is output in the serial word. The user may optionally defeat this automatic selection by the installation of a jumper. To force continuous output of generated time, jumper E1 to E2. To force continuous output of translated time, jumper E2 to E3.

Code Frame Period (real time). Selection is provided by menu M7 in basic manual. This option only operates at 1:1 (real time) and slower.



Translator setup

SLOW CODE



Select slow code rate

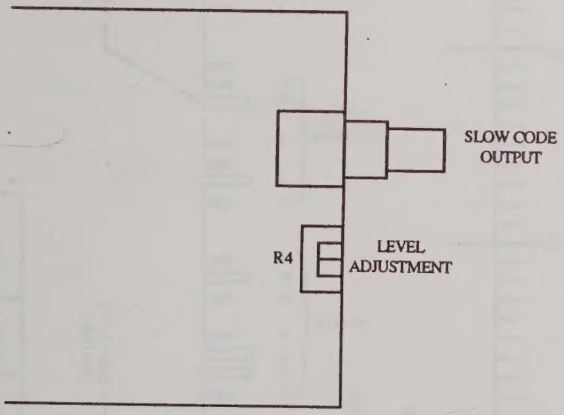
SPECIFICATIONS

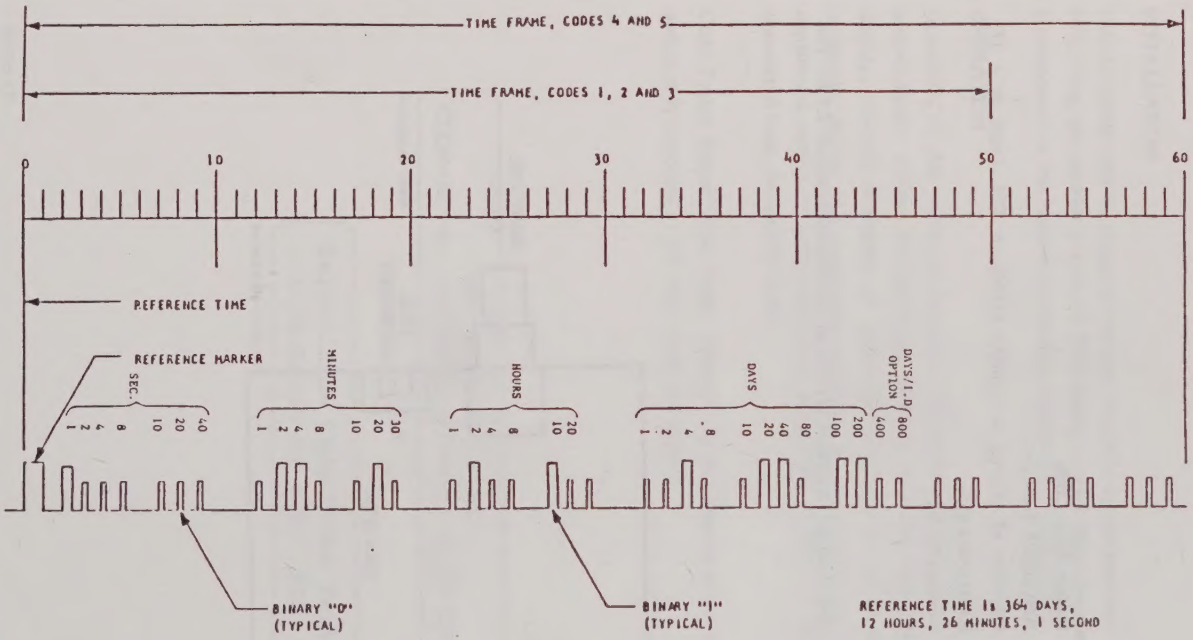
SLOW CODE Output

Format:	Datum Slow Code
Level:	Adjustable 0-5V p-p
Impedance:	Capable of driving a C-MOS LOAD, a TTL Load or a 1K Resistive Load.
Mode Ratio:	Nominally 5:2

ADJUSTMENTS

Level: While observing the modulated output (J1) on an oscilloscope, adjust R4 for the desired level.





CODE	PULSE RATE	FRAME PERIOD	BINARY ZERO	BINARY ONE	FRAME REFERENCE PULSE
1	50 PPS	1 SEC	4 MS	10 MS	20 MS
2	10 PPS	5 SEC	20 MS	50 MS	100 MS
3	5 PPS	10 SEC	40 MS	100 MS	200 MS
4	1 PPS	60 SEC	200 MS	500 MS	1,000 MS
5	1 PPS IOS	10 MIN	2 SEC	5 SEC	10 SEC

Datum Inc.

BI-LEVEL SLOW CODE REV. A

www.manualsplus.com
1000370